

# WHAT'S NEXT FOR DATA CENTRES?

INDIA



**TOTAL CAPACITY  
FOR INDIA**  
**655 MW**  
(Top 7 Cities)



**IT LOAD**  
**437 MW**  
(Top 7 Cities)



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# INDIA AS A DATA CENTRE STAR FOR THE NEXT DECADE

The investment explosion across the Indian data centre market over the past two years was long overdue, long expected, and deeply needed all in one, with multiple primary markets created at one time and the rapid development of campus sizes found in the most established global cities. Combining the acumen and expectations of the largest global cloud services and hundreds of billions of rupees in investment, India is moving straight to the highest level of sophistication with a global hub in Mumbai and major clusters coming in Noida and Chennai. This interest will drive market size from the current 650 MW to well over 1 GW over the next five years, with further investment coming thereafter, as less than half the country currently has access to the internet. The key trio of main hyperscale services (Amazon Web Services, Microsoft Azure, Google Cloud) are each present in multiple cities, with plans for further regional development as ever-larger deals are signed for corporate and government business. These are joined

by major services from China such as Tencent and Alibaba, both of which view India as an important growth market as they scale across Asia. Each of these services provide attractive clients for the increasing array of operators, with ever-larger leases being signed as these firms battle for local market share. Google and Microsoft have both intriguingly chosen to partner with Reliance Jio for new data centre development, with Google placing a \$4.5 billion investment into the telecom firm.

A diverse array of new operators have altered the Indian data centre landscape, bringing fresh ideas and scalability across cities. The country has long been home to international players so the influx of capital is not novel; Singapore's STT has long been the largest operator in India with roughly a quarter of capacity, and Japan's telecommunications giant NTT follows with ten locations of their own.

“The key trio of main hyperscale services (Amazon Web Services, Microsoft Azure, Google Cloud) are each present in multiple cities, with plans for further regional development as ever-larger deals are signed for corporate and government business”



What is new is the sheer array of entrants at once, choosing to construct ever-larger first phases and immediately pursuing multi-city expansion. Bridge Data Centres, Colt Data Centres, and Princeton Digital Group each decided to develop their first Indian campuses in Mumbai, replicating a successful model formed via other builds across Southeast Asia. Others have elected to enter the country with a local partner; Web Werks received a recent investment from Iron Mountain and Adani has teamed up with EdgeConneX, with both planning to develop in most primary markets in coming years. Equinix chose to enter Mumbai as well by purchasing the local operations of GPX, and Yotta Infrastructure recently formed with an initial campus in Mumbai and others coming in Chennai, Delhi, and Kolkata.

To attract development in their local regions, several states have created packages of data centre-based incentives, taking cues from development agencies globally. These can take the form of tax benefits on land or equipment, and serve to provide considerable relief for the nine to ten-figure construction costs on large-scale development. Incentives also provide a business-friendly climate to development, particularly when site acquisition

and initial power supply may occasionally prove challenging outside of established industrial park areas. Green energy will be imperative in coming years, particularly from demands of large tenants who have pledged to reduce or eliminate emissions entirely; Reliance Jio and Nxtra have already obtained solar power for upcoming developments and others will soon follow. Data sovereignty is also being reviewed at the national level, with the possibility that a localization law could require all data produced within India to stay locally. This could potentially lead to further builds with the large number of people that have yet to gain internet access and the continued rollout of such data-heavy concepts such as 5G or the Internet of Things (IoT).

The view for the future is exceptionally optimistic; few markets globally can double in size in less than a decade, let alone build several cities to primary market scope, absorb over \$10 billion in current and committed investment all while potentially creating 500 million new internet users. As the country has the ability to leap directly into the multi-cloud age, India will be a main data centre growth hub for the next decade.

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Top 4 operator share of total capacity (65%)

No. of DCs

Total Capacity

STTelemedia	15*	175 MW
NTT	10	128 MW
CtrlS	6	79 MW
sify	9	45 MW

\* STTelemedia # of DCs includes Ahmedabad

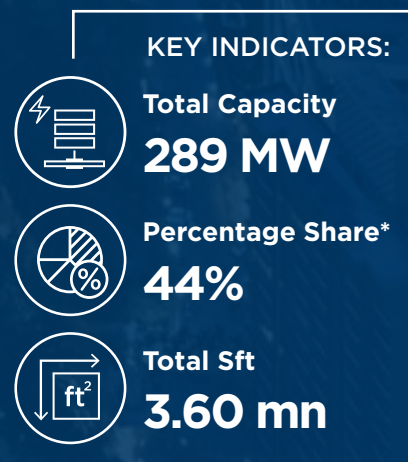


# Mumbai

Mumbai serves as the largest market in-country and the first stop for international deployments, with nearly half of all capacity in major cities across India residing in the greater area. Several long-term players have scaled in recent years across multiple sites, including STT, CtrlS, Sify, Nxtra Data, and NTT, and these have been joined by an ever-increasing number of new operators. Global REIT Equinix signed a deal in 2020 for their first foray into India, agreeing to acquire the 19 MW local operations of GPX for \$161 million. Recently formed Yotta Infrastructure (backed by the might of the Hiranandani Group) chose Mumbai for their first location of 50 MW, and the

new AdaniConneX venture is also pursuing a campus along with new campuses from Colt and Bridge Data Centres. Many of these large projects are designed for major cloud services, with Amazon Web Services, Microsoft Azure, Google Cloud, Tencent, and Alibaba all present. Competition for choice sites remains fierce, with land along the Thane-Belapur Road recently snapped up by Web Werks and NTT, and multiple operators still searching for key sites with available power and fibre. This rapid growth has enabled Mumbai to scale from a lower secondary market to a near-global-primary size in just three years, with continued expansion continuing.

“Mumbai serves as the largest market in-country and the first stop for international deployments”

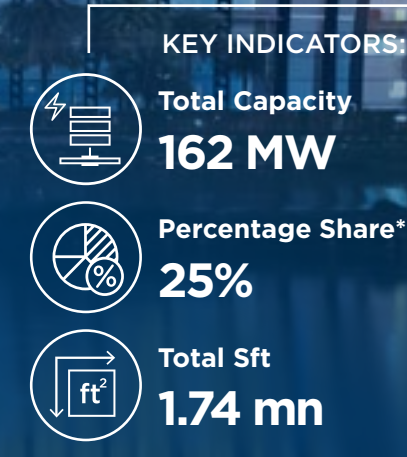


\*This figure is the city-wise percentage share of existing pan India colocation data centre capacity

# Bengaluru

Long considered the IT hub of India, it is only natural that Bengaluru would enjoy a major data centre presence, boasting one quarter of the overall capacity across the seven key markets. Two clusters have emerged among the many facilities present, with Electronic City (ESDS, Sungard, Sify, NTT)

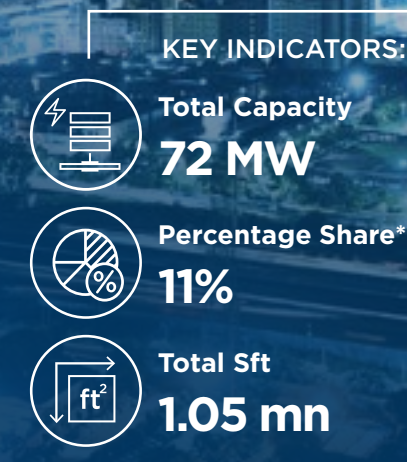
and Whitefield (Nxtra Data, Evoque, STT, NTT also) each with a full complement befitting the power of the IT sector in both areas. With no large projects immediately on the horizon, it remains to be seen if newly created workloads move to newer campuses in smaller cities across the country.



# Delhi

Greater Delhi and particularly Noida have proven especially popular for data centre development of late, with NTT, Yotta Infrastructure, AdaniConneX, and Reliance Jio (who has plans for a \$1 billion campus) all closing on a collective 55 acres of land for new builds over the last eight months. A mix of hyperscale need and the targeting of

potential government business as has occurred globally have provided the acquisition impetus, and rumors abound of further players eyeing additional sites. STT currently has three locations in market (and recently completed a major 360,000 square foot lease with DLF), and NTT, Sify, Nxtra, NxtGen, and a variety of web hosting firms all operate facilities.



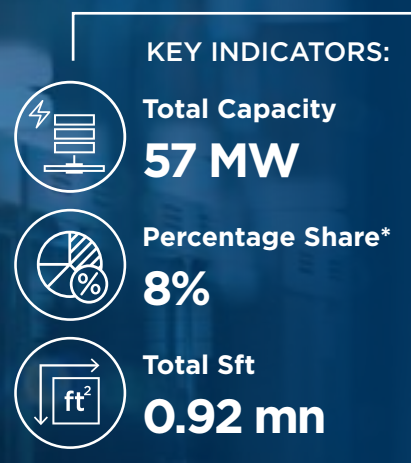
\*This figure is the city-wise percentage share of existing pan India colocation data centre capacity



# Chennai

The convenient coastal location of Chennai provides the market with the second-highest number of undersea cables after Mumbai in-country, and consequently means that Amazon Web Services, Microsoft Azure, Google Cloud, and Tencent all have local deployments in some form. The five current cables will shortly be joined by the MIST system in 2022, connecting both Mumbai and Chennai to Singapore and Ngwe Saung in Myanmar, thus providing additional linkage to the busy Southeast Asia region.

Chennai is thus projected to leapfrog other markets to the second-largest across India, with Yotta, CtrlS, Princeton Digital, STT, and NxtGen all launching new campuses in coming months and adding to local capacity.

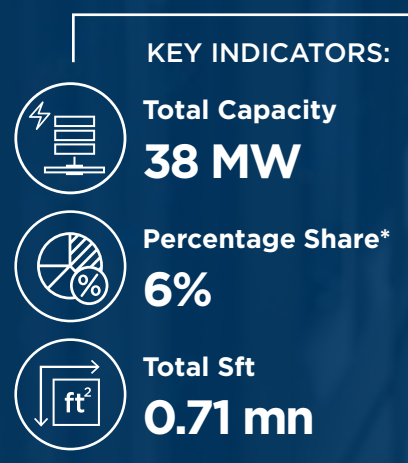


“The convenient coastal location of Chennai provides the market with the second-highest number of undersea cables after Mumbai in-country”

# Hyderabad

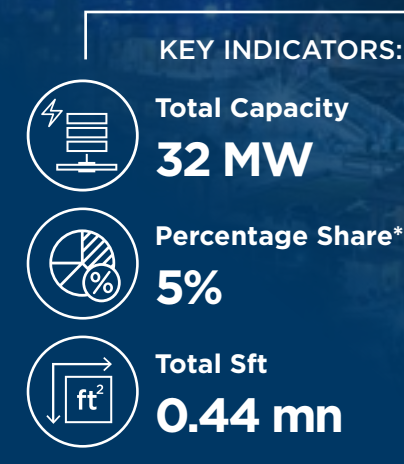
As a city with a strong IT presence, Hyderabad to date has been a global tertiary-sized market with occasional key players such as STT, Sify, and CtrlS. This will likely be changing shortly, as Amazon acquired three large sites in and around the area in November with plans to construct a full region for AWS.

This is only the second region in-country for the cloud giant after Mumbai, and the company plans to spend \$2.8 billion to launch by mid-2022. Major cloud services tend to beget others, so it remains to be seen if the ecosystem will grow rapidly in Hyderabad.



# Pune

Pune is an edge data centre market, with national players Nextra, STT, and Web Werks joined by an array of local web hosting firms. Microsoft Azure has proven an early adopter locally, forming their Central India region in Pune in 2015 and continuing to add services thereafter building to a full availability zone this year. This investment avoids the more standard Mumbai-Chennai convention for major cloud deployments, and one that could assist in scaling Pune market to beyond the current 32 MW size.

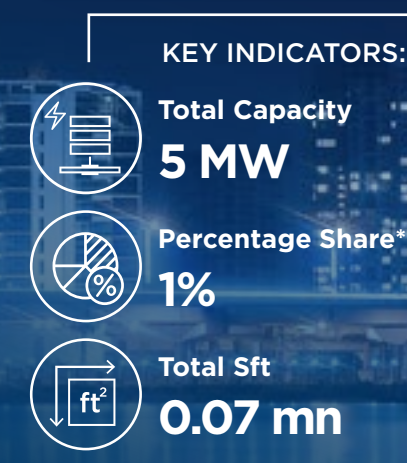


“Pune is an edge data centre market”

# Kolkata

Kolkata is just beginning its data centre journey, with big operators such as Sify and STT having small deployments locally to serve the city. Yotta Infrastructure provided some exciting news early in 2021, securing an ex-auto manufacturing site for an upcoming data centre campus

in coordination with parent company Hiranandani Group. The eventual 240 MW site will create a regional hyperscale option, adding further possibilities beyond the current Amazon Web Services edge location.



“The eventual 240 MW site will create a regional hyperscale option”



# PEOPLE/MW

City	Population	MW	People/MW
Kolkata	14,617,882	5	2,923,576
Delhi-NCR	26,454,000	72	367,417
Hyderabad	9,700,000	38	255,263
Pune	7,276,000	32	227,375
Chennai	8,917,749	57	156,452
Mumbai	20,748,395	289	71,794
Bengaluru	10,456,000	162	64,543
Beijing	21,893,095	359	60,984
Tokyo	37,468,000	735	50,977
Shanghai	24,870,895	585	42,514
Chicago	9,901,711	400	24,754
London	14,257,962	660	21,603
Dallas	7,673,305	422	18,183
Silicon Valley	9,660,000	541	17,856
Frankfurt	5,604,523	377	14,866
Singapore	5,703,600	410	13,911
Northern Virginia	9,814,928	1619	6,062



## Food for thought

While data centre capacity is constructed for a multitude of reasons (see our Global Market Comparison), local population can be an interesting proxy to determine potential growth of a local market. Several long-established metro areas around the world have a person-per-

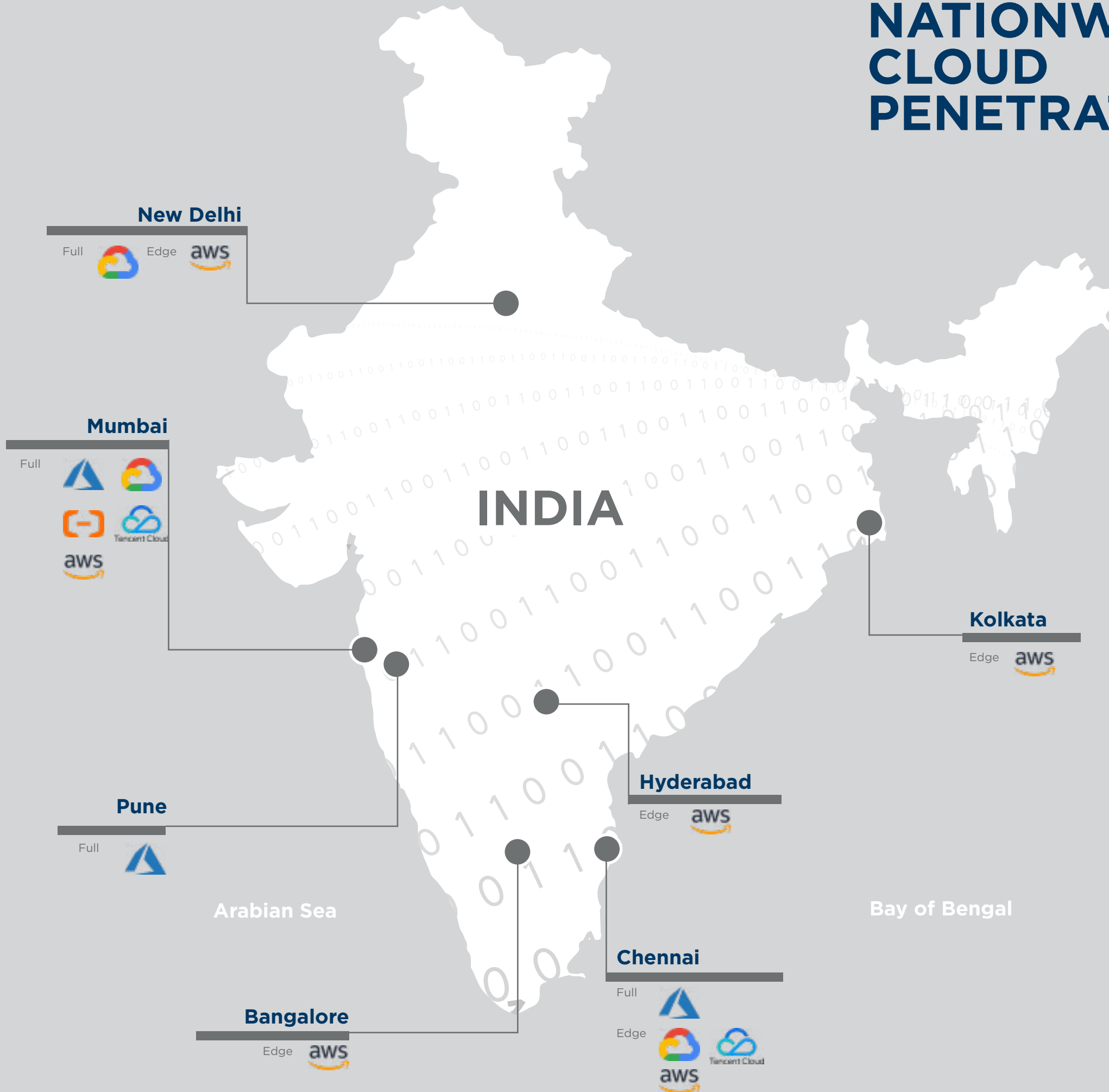
megawatt of roughly 15,000 to 25,000 people. By this metric, every major metropolitan area in India has a long way to go before reaching maturity, particularly as there are several large cities that have yet to develop any data centre ecosystem at all.

# STRONG BACKING FOR LOCAL OPERATORS

Local data centre firms have received a considerable amount of financial backing from global investment groups as each has looked at India as an attractive growth market. This backing will enable each firm to scale across new markets and expand currently operating campuses to respond to local demand. Investment has rapidly accelerated over the past two years, with continued rumors of further new players coming soon.

	▶		Iron Mountain invested in NxtGen early in 2021 as part of a larger market strategy across the country.
	▶		Chindata and Bridge Data Centres merged in 2019, with both ventures backed by Bain Capital
	▶		Equinix signed to acquire GPX Mumbai operations in 2020 for \$161 million
	▶		Formed joint venture to expand in three markets and enter three new markets, with Iron Mountain contributing \$150 million
	▶		Go4hosting serves as the web hosting arm of cyfuture providing a variety of services to major corporations
	▶		ESDS has received minority investments from Canbank locally and GEF Capital from Brazil
	▶		Carlyle took a 25% interest in the Bharti Airtel-owned Nextra Data in 2020 at an investment amount of \$235 million
	▶		Evoque acquired by Brookfield as a spin-off from AT&T for \$1.1 billion in 2019
	▶		Cyquator serves as the web hosting arm of media company Essel Group
	▶		Yotta acts as the data center arm of the Hiranandani conglomerate with \$2 billion invested
	▶		Initial \$60 million funding round in 2008 from Pioneer, IDBI, and Sculptor (then Och-Ziff)
	▶		Data First acts as the web hosting arm of Cloud Planet
	▶		Ebix acquired Trimax for \$10 million in 2019
	▶		Formed a joint venture in 2021 to build sites in five cities

# NATIONWIDE CLOUD PENETRATION



As with most large countries worldwide, the major cloud services are competing for market share across India with a mix of full and edge regions depending on initial and continued take-up among large corporations and government entities. Amazon Web Services most recently acquired three sites in the Hyderabad area, and Google Cloud and Microsoft Azure have signed agreements with Reliance Jio to build large campuses across the country.

Major Cloud Services:

- amazon
- Google Cloud
- Alibaba Cloud
- Microsoft Azure
- Tencent Cloud



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